



70063-00004

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thienna Ho

Serial No.: 10/599,779

Filed: 06/28/2007

Title: SKIN LIGHTENING METHOD

Art Unit: 1617

Examiner: Gina Yu

Declaration Under 37 CFR Section 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir or Madam:

I, the undersigned Dr. Nikolay N. Barashkov, declare and say:

1. I have more than thirty years of experience in area of spectral research in chemistry and medico-biological applications, both in academia and industry, including specialty chemicals, biotechnology, as well as food and animal feed industry, and have applied for and obtained numerous patents in my field. I hold doctoral degrees in Organic Chemistry and Polymer Chemistry and in Polymer Chemistry and Physical Chemistry from the Karpov Institute of Physical Chemistry in Moscow, Russia. Further details concerning my academic training, work experience, publications and activities are presented in my résumé attached as Exhibit A to the present declaration.

2. I have received no compensation in exchange for submitting this

declaration, and have no personal interest or stake in the outcome of the above-referenced patent application.

3. I have reviewed and am familiar with the above-referenced patent application, Serial No. 10/599,779, Skin Lightening Method. I have also reviewed U.S. Patent No. 4,296,130 ("Herschler") and the most recent office action of the present application, dated November 13, 2009.

4. The phrase "beautify the complexion," which is mentioned by Herchler as one of applications for methylsulfonylmethane (MSM), undoubtedly refers to providing the skin a softer, smoother texture and appearance. Softening was evidently important to Herschler because it is expressly named in the second of only two total claims of the Herschler patent. The Herschler patent also discusses the softening and smoothing skin effect of MSM in numerous places, and claims that MSM provides anti-aging benefits for skin by making skin more pliable (i.e., softer).

5. The Herschler patent does not anywhere disclose or imply that MSM lightens skin tone or coloration. Instead, with respect to skin the Herschler patent repeatedly discloses only that MSM makes skin softer, smoother and more pliable. If Herschler had intended "beautify the complexion" to also refer to lightening skin tone, he would have expressly described a tone lightening effect. Among other things, at the time the Herschler patent was written (1979) and even much later it was not known that MSM exhibited a tone-lightening effect on skin. Therefore this effect could not have been presumed from the general phrase "beautify the complexion," absent any explicit disclosure of a skin tone lightening effect by Herschler.

6. The word "complexion" has no special technical meaning in organic or physical chemistry relevant to the appearance of skin.

7. The word "complexion" may itself have several possible meanings from ordinary use. From my experience in the ordinary use of English, people sometimes refer to a "light complexion" or a "dark complexion" when referring to skin tone. However a phrase like "beautiful complexion" would not be considered as referring to skin tone, because beauty is not considered limited to skin of a particular color by most people. In fact many in America would have considered (and still would consider) it offensive or racist to imply that skin of a lighter color is "more beautiful" than skin of a darker color. Therefore, a chemist of ordinary skill writing a patent application in 1979 would not have used "beautify the complexion" to refer to lightening skin tone, first of all because the phrase would not have been understood in the intended way, and second of all because use of the phrase to mean lightening skin tone would have risked offending the reader.

8. For the reasons explained in the foregoing paragraphs, an organic chemist of ordinary skill, upon encountering the phrase "beautify the complexion" in the Herschler patent would have understood the phrase to refer only to the softening and smoothing effect of MSM that Herschler described, and not anything else.

9. From my experience and training in organic and physical chemistry, I am not aware of MSM or any similar substance being known or recognized as capable of lightening skin tone when administered to a human or animal. Skin lightening is an unexpected, not predictable result of administering MSM that was first reported, so far as I know, by the inventor of the present patent application Serial No. 10/599,779.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false

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statements may jeopardize the validity of the application of any patent issued thereon.

Respectfully submitted,

Date: December 7, 2009


Dr. Nikolay N. Barashkov

EXHIBIT “A”

Dr. Nikolay N.Barashkov

SUMMARY

30+ years of experience in area of spectral research (mainly fluorescent research) in chemistry and medico-biological applications, both in academia and industry, including specialty chemicals, biotechnology, as well as food and animal feed industry. Proven ability to apply knowledge of organic chemistry and physical chemistry, simultaneously work on multiple batches of high complexity and recommend process improvements in such areas, as preparation of dozens new fluorescent dyes-monomers, and hundred new polymers, identification and characterization of prepared compounds by HPLC, NMR, FTIR, MS, GPC, UV-Vis, fluorescent spectroscopy and other physico-chemical methods. Team player who works well with others and has good skills in writing proposals. Has desire to learn and ability to adapt well to new projects and environments.

PROFESSIONAL EMPLOYMENT AND EXPERIENCE

Micro Tracers, Inc, San Francisco, CA

Director of R&D and Technical Services

01/2006-Present

Applied research and development in the areas of chlorine-free methods for sterilization of contaminated waters, as well as creation of new microtracers, including nanosized microtracers.

- *Created new chlorine-free electrolytic and photochemical methods for sterilization of contaminated waters (presentation at two ACS Meetings, 2006 and 2007, submitted SBIR Proposal for EPA);

- *Developed new alumina-based and silica gel-based microtracers for feed and pharmaceutical industries;

- *Created ferromagnetic nanoparticles suitable for making liquid microtracers;

- *Provided analytical support in characterization of existing iron-based microtracers, as well as selenium-based products manufactured by Micro Tracers, Inc.

ANRESCO Laboratories, San Francisco, CA

Senior Consulting Chemist

10/2005-12/2005

HPLC analysis of aflatoxins and vitamins

Biotium, Inc, Hayward, CA

2004-2005

Senior Scientist

Applied research in the area of the synthesis of small molecules, such as fluorescent dyes and related biochemical reagents for life science and drug discovery, as well as in the area of protein chemistry:

- *Developed new Ethidium Homodimer III which is capable to form the fluorescent complexes with double-strained DNA and has higher binding affinity compared to known homodimers

- *Proposed improved synthetic procedures for making fluorescent calcium indicators; membrane potential dyes; fluorogenic alkaline phosphatase substrates; bioluminescent enzyme substrates; fluorogenic peptidase substrates; biotin derivatives used as the cellular tracers.

- * Developed QC procedures, including HPLC and NMR evaluation of final products.

Radiant Color, Richmond, CA

1997-2004

Senior Research Scientist

Applied research, scale-up and development in the areas of small molecules, such as fluorescent dyes, fluorescent polymers and polymer-dye compositions:

- *Planned and prioritized numerous projects; managed all aspects of the development process being a leader of the technical group consisting of one Senior Chemist and two technicians.

*Handled scale-up processes in-house to supply new fluorescent pigments on 50-80 lbs scale.

*Proposed and developed new methods of fluorescent dyes' modification by incorporation of functional groups (together with Keystone Aniline Corporation and Advanced Synthesis, Inc).

*Proposed and carried out new synthetic routes for making fluorescent pigments with improved color development and high level of lightfastness (2 US patents and 3 European patents granted).

*Created method for preparation of spherical nanoparticles (size below 150 nanometers) of polymer-dye compositions for ink jet technology and military application (US patent pending, submitted Proposal for STTR Program of DoD).

*Investigated photophysical behavior of organic compounds which show unique aggregation-induced emission from nanoparticles (size 40-120 nm) (Together with Institute of Nano Science and Technology, Hong Kong, US Patent Pending, submitted NSF Proposal).

*Developed new polyester-based hybrid material for sensor application containing crystals of triboluminescent Eu-complex (2 US patents pending, submitted Proposal for SBIR Program of NASA).

*Co-authored 8 published articles, 9 patents and presented 7 papers at international and national conferences.

University of Texas at Dallas, Department of Chemistry, Dallas, TX

1994-1997

Research Scientist

Basic and applied research, development and analysis of new small molecules, such fluorescent monomers and model compounds, and light-emitting polymers:

*Developed new vinylenearylene, terthiophene, benzimidazole and benzoxazole derivatives.

*Created and investigated new poly(dialkoxyarylenevinylene)s for producing new materials for flat panel display technology.

*Developed new method of synthesis for aromatic polyamides and polyesters with chromophor fragments in the chain which have studied as materials for light-emitting diode applications.

*Characterized new materials using HPLC, FT-IR, NMR, MS, UV-Vis, luminescence, GPC.

*Trained undergraduate and graduate students to use methods that have been developed.

*Co-authored 15 published articles and presented eight papers at international and national conferences.

Texas Tech University, Department of Physics, Lubbock, TX

1993-1994

Visiting Associate Professor

Research and development of new polymeric materials for use in scintillator devices:

*Created method of preparation for epoxypolymer-dye compositions to produce new ultrafast plastic scintillators and wavelength shifters.

*Characterized new polymer-dye compositions by using time-resolved fluorescent technique.

*Taught physics undergraduate courses.

*Co-authored published 3 articles and presented paper at national meeting.

Fermi National Accelerator Laboratory, Batavia, IL

1993

Visiting Scientist

Research and development of new radiation stable polymeric materials for plastic scintillators:

*Developed new copolymers of styrene with luminophore fragments in the chain and polystyrene-dye compositions that proved to be effective new plastic scintillators.

*Created method of preparation for epoxypolymer scintillators with improved radiation stability.

*Evaluated scintillation efficiency and spectral properties of new plastic scintillators.

*Co-authored published article and presented paper at international conference.

Karpov Institute of Physical Chemistry, Moscow, Russia

1978-1994

Head of Chemistry Group

Basic and applied research, development and laboratory management in the area of small molecules, such as new reactive fluorescent dyes, and light-emitting polymers on their base, including investigation of proteins, containing fluorescent labels:

- *Proposed new multistep synthetic routes for making fluorescent dyes with different reactive groups.

- *Investigated photophysical properties of proteins containing fluorescent sulfopyrene moieties.

- *Invented about eighty new colored and fluorescent polymers using copolymerization and copolycondensation techniques.

- *Commercialized new polymer-based materials (films, fibers, composites) with unique optical properties and high photo- and radiation stability.

- *Provided supervision of 6 Ph.D. and 4 M.S. students.

- *Authored 6 books, 75 published articles and 25 Russian Invention's Certificates.

PUBLICATIONS

Six books (two of them "Fluorescent Polymers" and "Luminescence in Public Health" were published in English, four - in Russian), 95 published articles, 25 Russian Inventor's Certificates, two US patents and three European patents granted and 8 US patents pending.

EDUCATION

2nd Phd (Degree of Doctor of Sciences in Polymer Chemistry and Physical Chemistry). Dissertation "Preparation of polymers with predicted spectral-luminescent properties by chemical modification of the molecular chain"

Karpov Institute of Physical Chemistry, Moscow,
Russia

1991

1st Ph.D. (Organic Chemistry and Polymer Chemistry). Dissertation "Synthesis and isomerization cyclization of aromatic polycyanoamides and polycyanoureas"

Karpov Institute of Physical Chemistry, Moscow,
Russia

1978

M.S. (Chemical technology of organic synthesis). Institute of Fine Chemical Technology,
Moscow, Russia

1975

PROFESSIONAL AFFILIATIONS AND RELATED ACTIVITIES

American Chemical Society

1995

Visiting Lecturer of Department of Chemistry at UNC at Charlotte

2003

Visiting Professor of Department of Chemistry at Eurasian National
University, Astana, Kazakhstan

2005-Present

The winner of 10 InnoCentive Challenges who has been nominated among 11 other most successful InnoCentive Solvers with a Title "Top Solver of the Year 2007" and among 17 other most successful InnoCentive Solvers with a Title "Top Solver of the Year 2008"

2007-2009

(see web site <http://www.innocentive.com/servlets/project/ProjectInfo.po?s=AW>).

PERSONAL

US Citizen

2002